

What Is Claimed Is:

1. An adaptive cruise control system for motor vehicles, having a sensor system (12) for acquiring data concerning a target object (18) and concerning the own vehicle (10), an actuator system (16) for controlling the longitudinal movement of the vehicle (10), a controller (14) that intervenes in the actuator system (16) within certain intervention limits (Lim1, Lim2) in order to maintain a defined, controlled target distance to the target object (18), and an output device (20) for issuing a takeover request (FÜA) to the driver if the controlled target distance cannot be maintained, characterized by a prediction system (22) for predicting a conflict situation in which the controlled target distance cannot be maintained, and for initiating the takeover request (FÜA) before the conflict situation occurs.
2. The adaptive cruise control system as recited in Claim 1, wherein the prediction system (22) includes models (26, 28) of the vehicular dynamics of the target object (18) and of the own vehicle (10), in order to calculate prediction values (vEGO, xZ0) for variables of the vehicular dynamics of the own vehicle and of the target object at a particular prediction time point (tPräd).
3. The adaptive cruise control system as recited in Claim 2, wherein the prediction system (22) is fashioned for the purpose of calculating from the predicted values an anticipated setpoint distance and an anticipated actual distance between the target object (18) and the own vehicle (10) at the prediction time point (tPräd), and to initiate the takeover request (FÜA) if the relation

between the setpoint distance and the actual distance meets a defined initiation criterion.

4. The adaptive cruise control system as recited in Claim 3, wherein the initiation criterion is a threshold value for the quotient of the actual distance and the setpoint distance.
5. The adaptive cruise control system as recited in one of Claims 2 to 4, characterized by an adaptation module (24) that is fashioned so as to dynamically vary the prediction time point ( $t_{Präd}$ ) dependent on data provided by the sensor system (12).
6. The adaptive cruise control system as recited in one of Claims 2 to 5, characterized by an adaptation module (24) that is fashioned so as to dynamically vary the initiation criterion for the takeover request ( $FÜA$ ) dependent on data that are provided by the sensor system (12).